In an embodiment of the invention that is detailed in claim 2, there is also provided in the integrated circuit an R/C oscillator that acts as a clock-signal source for the circuit elements provided in the integrated circuit and that also acts as a timebase for the bit-rate detection.

Advantageously, the clock signal generated by the R/C oscillator may also be provided to circuit elements outside the integrated circuit, for which provision is made in a further embodiment of the invention detailed in claim 3. It may with particular advantage be used for an externally provided microprocessor.

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As provided for by further embodiments of the invention detailed in claims 4 and 5, the interface circuit may also receive and transmit not only individual bytes but also complete messages that are transmitted along the data bus. Such data may, if required, be buffer-stored in the interface circuit.

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The integrated circuit according to the invention is thus capable of general-purpose use even as a system base chip with interface and serial/parallel conversion for complete message transmission.

As already explained above, the data may be transmitted along the data bus serially, in particular under the SCI/UART interface (Serial Communication Interface/Universal Asynchronous Receiver.Transmitter) standard. The serial/parallel converter in the integrated circuit is then advantageously so arranged, as detailed in claim 6, that it receives the data under this transmission standard and converts it into parallel data, or vice versa.

These and other aspects of the invention are apparent from and will be elucidated with reference to the embodiments described hereinafter.

In the drawings:

The sole Figure of the drawing shows in a block circuit diagram an integrated circuit 1 according to the invention and a microcontroller 7 provided outside this integrated circuit 1.

The invention relates solely to the integrated circuit 1, which is capable of performing a plurality of different functions in a self-contained fashion and which has for this purpose various blocks of circuitry that will be explained in what follows.